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ABSTRACT

This document reports on a project that developed, through case studies of various countries, empirical evidence of the impact of curriculum content and method on national economic, social, and political growth. Specific problems studied were (1) occupational education and training for development, (2) education's role in the formation of social and civic attitudes, and (3) education and the rural-urban transformation. The various case studies suggest that the process of education is almost everywhere too narrowly conceived and generally underplanned or poorly planned. (ILR)

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FINAL REPORT

Project No. 6-2597
Contract No. OEC-4-7-062597-1654

CONTENT AND INSTRUCTIONAL METHODS OF EDUCATION FOR THE ECONOMIC-POLITICAL-SOCIAL DEVELOPMENT OF NATIONS

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April 1971

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United States Department of
Health, Education, and Welfare

Office of Education
Bureau of Research

F I N A L R E P O R T

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The research reported herein was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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PREFACE

The period of time covered in this Final Report on Project No. 6-2597, Contract No. OEC-4-7-062597-1654, is so extended, and so many people have made important contributions to the 18 monographs which have been submitted, that it is not possible to name them all. We bow to the policy of not singling out by name government personnel connected with the project and hence limit ourselves to a general expression of appreciation for the constant encouragement and the friendly support we have received throughout from the Basic Studies Branch, Division of Elementary and Secondary Education Research of the U. S. Office of Education; and there were many times when this support was coupled with genuine understanding of difficulties and delays inevitably associated with a research undertaking of major scope.

Even in a deliberately anonymous preface, it would be improper not to single out for mention Dr. William M. Rideout, Jr., now Associate Professor at Florida State University, who carried the major burden of work in the completion of the contract commitment, and served ably and concurrently as goad and friend to the research staff; nor, despite contrary custom, should the name of Miss Carolyn DeYoung be omitted, since she had the major responsibility for the exacting task of transforming raw research reports into completed monographs. In addition to specific acknowledgements made in the prefaces of individual monographs, our gratitude to officials and others in the many countries in which field studies were carried out must once more be mentioned. Without their understanding and their assistance, the research tasks could not have been completed, and it is our hope that their solicitous cooperation is at least partly rewarded by the publication of the studies and by new insights developed jointly with them, insights which may contribute to the development of their educational systems.

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INTRODUCTORY SECTION

Summary

The purpose of the study was to gather and process empirical data as bases for the formulation of hypotheses concerning the content of education at all levels and the instructional methods that seem to have the greatest impact on the transformation of traditional societies. Research teams were under the overall direction of Paul R. Hanna, Professor of Education and Director, Stanford International Development Education Center (SIDEC) until 1968, and following his retirement, Dr. Arthur P. Coladarci, now Dean of the School of Education. The teams were organized by Principal Investigators Robert B. Textor, Professor of Education and Anthropology, Dr. Eugene Staley, Professor of Education and Economics, succeeded upon his retirement in 1968 by Dr. Martin Carnoy, Professor of Education, and Dr. Hans N. Weiler, Professor of Education and Political Science. Research teams under the leadership of the respective Principal Investigators carried out a total of 31 case studies concentrated on an investigation of the relationship of educational impacts and economic goals within the private and official sectors, and on the relation of these impacts with political and social institutions and behavior. Of the total number of studies, 15 were published by SIDEC and submitted to the Office of Education in fulfillment of the research contract, in addition to a final report prepared individually or in collaboration with other members of the faculty of the School of Education for each of the three subsections. Thus the final product of the research consists of Eugene Staley's report, "Planning Occupational Education and Training for Development", and five country studies undertaken in Jordan, Tunisia, the Philippines and two in India in a series on Occupational Education and Training (OET); Hans N. Weiler's report on "Summary of Research on Education and the Formation of Social and Civic Attitudes" and six country studies in Uganda, Colombia, Micronesia, Venezuela, New Guinea and a cross-cultural investigation of in-service training practices of teachers for Mexican-American children in the California school system, in a series on Education and the Formation of Social and Civic Attitudes (ESCA); and a report prepared by Robert B. Textor, Frank J. Moore and George W. Parkyn in collaboration with Dennis C. Sims and Richard L. Kimball, "Summary of Research on Education and the Rural-Urban Transformation", case studies in Thailand and the Philippines and a monograph by Dennis C. Sims on "Self-Image and Social Change Towards an Integrated Theory of Cybernetic Behavior" in a series on Education and Rural-Urban Transformation (ERUT). A further volume in the OET series provides an account of the proceedings of an International Workshop held at Stanford in summer 1967 on the subject of "Occupational Education and Training for Development" under the direction of Professor Staley.

The published monographs and reports are listed by author and title in the Appendix. Also listed there are an additional 19 studies

completed and in progress, which time and funds available did not permit us to publish. These cover investigations in Germany, Iran, Tunisia, Singapore, Tanzania, the Democratic Republic of the Congo, Ghana, Nigeria, Chile, Turkey, Thailand, Uganda, and two each in Liberia, Malaysia, and the Philippines, and one study undertaken among children of recent Chinese immigrants to San Francisco from Hong Kong. Of these studies, two fall into the OET series, eleven into the ESCA series and six into the ERUT series. As shown in the Appendix, a number of the monographs have by now also been published, accepted for publication or are under active consideration for publication by commercial and university presses.

The range of research undertaken -- both from a conceptual and geographic viewpoint -- argues against a further abstraction of findings beyond the generalizations of hypotheses and field results drawn in the final reports from the summaries provided in the individual case studies. If further generalizations are in order in this Final Report, they can be briefly stated.

The research strongly supports the view that the current problems of developing countries do indeed differ from the past problems of older nations. Educational development everywhere demands more than new school bottles for old educational wine. Curricular content and methods of instruction must be designed to meet new needs that differ not merely because they originate in wholly different economic, political and social settings, but because they must be met within a quite different time perspective requiring an accelerated schedule generated by the revolution of rising expectations, created by the process of education itself. The transition from a traditional order in the process of modernization and development involves a more fundamental change in values and behavior patterns than that faced by countries that are now developed. Education, under these conditions, creates the gap which simultaneously it is called upon to fill.

The studies carried out under this research contract offer no facile solutions. In modest and quite tentative fashion they point toward the directions in which such solutions must be sought and provide some benchmarks that may serve as reference points in steering a course for change in a still largely uncharted sea.

They do, however, make it clear that educators and planners must increasingly look toward educational processes that go beyond the various confines of school systems. The crucial finding, if any one can be singled out, is that we need to know more, much more, about education and its relation to the process of development. The studies provide some indication of the nature of such a base, but their main contribution is less the conclusions derived from testing a limited number of research hypotheses than in raising new and important questions for further study. These help to provide a little clearer definition of the challenging field of education for development.

Introduction

The central role of human resources in the process of development is generally recognized. It is also recognized that education plays an important role in upgrading human resources and preparing for modernization. But beyond such broad general statements the specific contribution of education to the process of economic and institutional change is not easy to describe.

It is evident that there is need for a deeper understanding of the role of education in the transformation of traditional societies as well as in the continuing process of adaptation and change required to maintain and promote human welfare in the more highly developed nations. Clearly, all forms of education are not necessarily good; some forms of education may be more suited than others to needs of nations and people at different stages of their economic, social and political development; and it is evident that the development-oriented educational planner must look beyond the narrow confines set by the time, space, and content limitations of traditional school systems. Educational experience cannot readily be transferred across cultural boundaries, nor across historical time.

Research is needed to clarify the various goals of education in relation to the particular setting in which it takes place; this may point to deviations, and even dissonance, between stated objectives and the real goal implicit in the actual behavior of existing educational systems.

This is the heart of the educational problems faced by any society -- modern or traditional -- in the process of change. It is a complex set of problems that will neither be solved quickly nor readily yield to any one research design. This is the underlying reason for the complex diversified approach to the research task under this contract. An attempt has been made to stake out a research area, covering a multiplicity of problems, where a beginning could be made in developing new insights, based on new facts derived from empirical data. In defining this area, the multi-disciplinary competence provided specifically by the Stanford International Development Education Center (SIDEC) and more generally by the School of Education and the broad range of talent and facilities available at the University have been kept in mind.

The principal thrust of the project was to develop, through a series of field case studies, empirical evidence on the success or failure of curriculum content and method to produce impacts on the achievement of economic, social, and political growth in polities representing different stages of transformation and different cultures. These data and the hypotheses generated from them were to serve in developing theoretical models, as well as practical guidelines, concerning content and methods of education compatible with development objectives in nationally specific cultural settings.

The purposes of education are multiple. In order to deal in adequate depth with the major aspects of concern in this investigation, the research design provided for approximately equal effort in three of the basic social sciences most directly relevant to the process of education for development: economics, political science, and social anthropology. Under the leadership of senior members of the faculty, research task forces were set up to work specifically on (1) problems of Occupational Education and Training for Development (OET), (2) the Role of Education in the Formation of Social and Civic Attitudes (ESCA), and (3) Education and the Rural-Urban Transformation (ERUT). Within the overall conceptual frame of the project, each of the teams developed its own specific guidelines.

Occupational Education and Training for Development.

Occupational education and training here mean all activities in schools or in employment or elsewhere which are either deliberately designed to prepare persons to perform well in occupational roles or do in fact do so. These occupational roles can be in industry, agriculture, commerce, government and politics, health services, education and research, journalism and other social communication activities, or household activities, including those of women occupied in homemaking.

The research focus was on occupational preparation as related to the attainment of economic, political, and social goals. Attention was deliberately not confined to the economic. This is one of the ways in which the approach departs somewhat, at least in emphasis, from that of a number of other discussions of occupational manpower problems. The economic, political, and social aspects of things do not exist separately in the real world; they are mental structures, very convenient for facilitating division of labor and getting ahead with certain kinds of analysis, but also dangerous because capable of disguising important interrelations that may be the essence of certain kinds of problems. The planning of education and training with a view to preparing people to perform well in modern-type jobs, thereby facilitating progress toward developmental goals, is such a problem.

Reference to "developmental goals" here is to the objectives set by a society for itself through a variety of decision-making mechanisms, sometimes implicitly, sometimes explicitly, as in a development plan. The goals of today's newly developing countries differ, of course, from country to country and also from time to time. But there are some common characteristics and some widely shared goals.

In their economic aspects, developmental goals generally call for increasing total and per capita output and income through adoption of more modern methods of production. Often there is emphasis on more equitable distribution of the product and on providing more employment opportunities.

For the attainment of these developmental goals, each developing country must somehow manage to generate substantial numbers of specially qualified personnel -- planners, administrators, entrepreneurs, political leaders, mechanics, technicians, teachers, engineers, agricultural advisers, modern-minded farmers, physicians and related health workers, and many other types.

All around the world, development planners and their specialists concerned with education and human resources development are grappling with urgent problems on how best to prepare persons for occupational roles in a changing economic-social-political system. The total process by which individuals acquire competence for occupational roles can usefully be thought of in terms of three components: education, training, and experience.

The research distinguished carefully between education and training, despite the fact that these terms are often used loosely and interchangeably even in professional writings. In the context of preparation for occupational roles, education means instruction and learning broadly relevant to performance in all or a considerable number of occupational roles (as well as to a great many other purposes and life situations). Training, on the other hand, is instruction and learning concerned with good performance of a specific task or a set of tasks making up a job or occupation. The distinction between education and training is mainly one of degree of specificity. There is no sharp dividing line; one merges into the other.

Besides the more structured forms of learning implied by the terms education and training, a third element in acquiring occupational competence is work experience. This term refers to the learning that takes place, much of it in an unplanned and unsystematic way, on the job, in the factory or workshop or service institution, or agricultural enterprise, or whatever the occupational setting may be.

There is deep concern everywhere with certain perplexing problems that face any society in preparing its members for adequate performance of occupational roles in modern or modernizing economic, social, and political systems. These problems have fundamental similarities (along with important differences) in countries at diverse levels of development and with dissimilar economic-social-political systems and ideologies.

Among the problems are these:

1. The overall concept or "philosophy" of occupational preparation appropriate to modern or modernizing societies. What types of learning have to take place to prepare people adequately for modern occupations? What are the functional roles in this learning process of general education, occupationally oriented education, specific training,

and work experience? When should the individual begin his occupational preparation? In what sequence should it proceed? Should it terminate when the individual becomes adult, or continue throughout the working career?

2. Ascertaining the kinds and quantities of qualified personnel needed by the employment system. What combinations of knowledge, skills, and personality traits are adequate, or optimum, for occupational roles of continuing or emerging importance? How can one throw light on this basic question? How can present and future needs be estimated, quantitatively and qualitatively?

3. Designing education and training programs and curricular content. To what extent and by what methods should the needs of the employment system be taken into account in constructing educational programs? How can specific training be better matched to the existing and emerging needs of the employment market? What are the implications, for education and training, of the need for versatility in adjusting to technological changes? Should the distinction between general and vocational education be maintained, or should both be reorganized so that each becomes an integral part of the common core of all education?

4. Determining institutional responsibilities for occupational education and training. What should be the respective roles of the formal school system and of employing organizations? Of other institutions and agencies? To what extent should specific training be provided before employment? In employment? What institutional arrangements, if any, should be made for updating knowledge and skills during employment? Within the school system itself, should there be comprehensive schools or separate academic and vocational schools or some combination of both systems?

5. Handling organizational, administrative, and financial requirements. What organizational mechanisms are required to establish an effective linkage between the school system on the one hand and the employment system on the other? How should the costs of occupational education and training be covered? To what extent is it desirable and feasible to have specific training costs borne by the employment system? What devices can be used for this purpose? What incentives can be devised to encourage extension and improvement of training within the employment system?

The aim of the research was to provide some helpful concepts, information, and ideas to persons who have to grapple with puzzling issues like these. Among such persons are decision makers or advisers concerned in the design, redesign, or improvement of education and training systems, students concerned with understanding education's role in economic-social-political development, and researchers seeking to locate problem areas where they may help advance the frontiers of knowledge or improve

social technology in a field that urgently needs such efforts. This was not intended as a search for universal solutions for the issues that it discusses.

What will work best in one environment at a particular state of development may not fit the circumstances of a different environment at another place or time. Furthermore, not enough is known about the complex factors (economic, psychological, social, political) interacting in this field to enable one to make definite statements on some of the most crucial points. While this sub-section will not refrain from reaching conclusions and putting forward positive suggestions on the basis of the best analysis and evidence available, every conclusion should be regarded as a hypothesis, subject to further testing and re-thinking, and every suggestion as tentative, for thoughtful reconsideration in each specific environment where it might be applied.

The research had a three-fold objective: first, a method of thinking about the problems involved in preparing people for adequate performance of occupational roles in a modern or modernizing society -- a conceptual framework or "model"; second, an analysis that brings key issues to the fore; and third, information that will help the reader to enlarge his acquaintance with suggestive experiences and current "best practices" in the field.

It is essential to be quite clear that education should seek to promote many aspects of self-fulfillment and a wide variety of social objectives. The time-honored and most universal aim of education is what the anthropologists call enculturation: fitting people to take part and to contribute satisfactorily in all kinds of interpersonal and institutional relationships required by their culture. Obviously, an important aspect of enculturation is preparation for doing a job that is both socially useful and a means of earning a living.

The Role of Education in the Formation of Social and Civic Attitudes.

One of the three special research areas was concerned with the role of education in the formation of social and civic attitudes. A substantial number of case studies have been produced, or are in preparation; the Final Report of the Principal Investigator provides a brief evaluation and synthesis of these case studies and an inventory on the state of research and the theory of the role of education in political socialization.

The major characteristic of the field of study to which this part of the contract has addressed itself is that it is new and is still in the process of being charted. While political socialization research within the United States has made noticeable progress over the past decade, the comparative study of the formation and change of socially and politically relevant attitudes is yet in its infancy. The research

is therefore of a truly exploratory nature. This is most of all reflected in the wide variety of case study designs which have been initiated and conducted under the auspices of this particular research endeavor.

It was felt that only a rather broad variety of research sites, research foci, and research methodologies could yield the kind of information that was at this point necessary to gain an understanding of the complexity of this particular field of analysis. Thus, individual case studies have been conducted in countries as different as Uganda, Venezuela, Malaysia, West Germany, and Liberia. While a common conceptual framework was maintained for all of these studies, the particular focus (expressed in the choice of both independent and dependent variables) of each study was deliberately set off from the focus of any other study in this series. Thus, one study emphasizes the phenomenon of political alienation, while another one addresses itself to the problem of inter-ethnic tolerance and prejudice. Other investigations were directed at the individual and environmental correlates of attitudes toward dissent and deviant social behavior, while yet another dealt with normative orientations toward a whole set of proclaimed "national goals."

A similar variety has been maintained in the methods which each study employs. While the basic technique of survey research was used in almost every study, significant variations with regard to the more specific kind of surveys were tried out in the different studies. Additional data gathering took place in a variety of ways, including structured observations, intensive interviews, documentary research, etc. In some cases, even the well established path of survey research techniques was left in order to explore the utility of more closely controlled experimental designs.

The wide variety of these approaches has yielded a tremendous amount of valuable information on the respective usefulness of any number of different research techniques in given settings. These experiences have been made all the more fruitful because of some very significant developments at Stanford University in the field of providing a wide variety of data analysis programs. Most notably a recently developed Statistical Package for the Social Sciences (SPSS), created out of the research work at the Stanford Institute of Political Studies, has made possible a vast expansion of available data analysis procedures.

It is not yet possible to point to a whole set of solidly validated propositions about the relationship between education and the formation of social and civic attitudes; but the exploratory efforts in this area have contributed substantially to understanding the complex nature of this area of research. The large amount of data that has been collected, and is being collected, under the auspices of this research endeavor, provides a valuable resource for the testing of a wide variety of promising hypotheses.

This utilization of the data with a view to more clearly defining the field is not only performed by those researchers who actually collected the data in the field. It is also becoming increasingly a very challenging field of activity for researchers not directly connected with the project.

There is thus reason to believe that a well-founded set of research priorities has been established for a subsequent and much more systematic research operation in the area of political socialization and education. Such a set of priorities includes a selection of the most promising research sites, as well as of substantive and methodological emphases that will guide our research in the future.

On the basis of such a frame of reference it is believed that subsequent research will go considerably beyond exploratory investigations, and will lead to a systematic accumulation of comparative data.

It is at this point that the present emphasis on overseas research sites is likely to give way to a more balanced research endeavor in which the role of education and the formation of social and civic attitudes within the United States will become an important link in the comparative design of an ongoing research program. Since a considerable amount of data is already available on political socialization in the United States, major gains are anticipated from such an extension.

Education and the Rural-Urban Transformation.

"Education and the Rural-Urban Transformation" (ERUT) was concerned with the actual and potential role of formal or informal education in transforming rural people's knowledge, beliefs, cognitive processes, values, attitudes, and skills in ways appropriate to coping with the demands, and taking advantage of the opportunities, deriving from urban influence.

The thrust of the ERUT research can be defined as follows:

1. It focuses on rural people -- that is, people enculturated in rural areas. Rural areas are defined roughly as areas characterized demographically by relatively low ratios of population to land area, and economically by primary production, principally of food and fiber. Included in this focus are people enculturated in rural areas who have moved to urban areas, whether temporarily for purposes of education or employment, or permanently as migrants.

2. ERUT focuses on the knowledge, beliefs, cognitive processes, values, attitudes, and skills of rural people. It examines the appropriateness of these in the light of the probable future conditions under which these people must live -- conditions which in many cases are feeling, or will probably soon feel, substantial and upsetting influences from urban centers.

3. ERUT focuses on the role that formal or informal education has played, and could potentially play, in shaping these knowledges, beliefs, cognitive processes, values, attitudes, and skills in ways judged or demonstrated to be appropriate to probable future demands and opportunities emanating from urban centers. "Education" as here defined applies both to formal schooling and to various non-school programs such as adult education, "continuing" education, extension education, community development, and so forth, whether administered primarily by face-to-face contact between teacher and pupil, or by techniques of mass communication. Within this focus, particular attention is given to the content and method of instruction.

While the ERUT research thus dealt specifically with influences emanating from urban centers, the notion of "modernization" was also indispensable to analysis and to theory building. "Urbanization" and "modernization" are best kept distinguished conceptually.

The conceptual definition of "modernization" was derived from Levy and focused on the technological setting of behavior, and specifically on the use of inanimate sources of power, and of tools. Levy and others have also specified behavioral correlates of relatively modernized societies, such as an emphasis on universalistic recruitment to role relationships which are defined in functionally specific terms, perceived in affectively neutral ways, and characterized by rational cognition. Attitudinal attributes of "modernity" have been clarified by writers such as Kahl.

It should be noted that modernized technology, social structure and attitudes frequently occur in non-urban settings -- as witness agriculture in places like Japan or Denmark, or the "modernist-activist" attitude structures found by Kahl among members of certain social strata in smaller towns in Brazil. Moreover, "urban" behavior and attitudes are often non-modern, as witness the large number of urban-residing ex-tribal people in Ibadan, or the thousands of peasant immigrants in the barriadas surrounding Arequippa. Finally, it should be stressed that "urban" styles of life can and do vary within and between cultures: "urbanity" in Sao Paulo differs substantially from "urbanity" in Rio de Janeiro, and both in turn differ from "urbanity" in Bangkok.

Despite the above observations, it is also true beyond question that urban styles of life around the world are relatively "modern" in technological base and, indeed, could hardly be otherwise. Empirically, it works out that most urban communities in the world are more "modern" than are most rural communities. For these and other reasons, the ERUT research looked at education affecting the enculturation and socialization of rural people from the standpoint of whether such education is likely to promote "modernization" of knowledge, belief, cognitive processes, values, attitudes, and skills. The working assumption

was that in general, but with numerous substantial adaptations to local cultural and social conditions, education that promotes modernization will also enhance the typical rural person's ability to defend himself against unduly punishing demands from urban centers, and to take advantage of some of the opportunities made possible by these urban centers.

The ERUT research thus was concerned with the modernization of the lives of rural people, whether these lives are lived out in rural or in urban environments. On humanistic grounds it can be argued that such modernization should be adjusted wherever possible to the culturally given preferences of all persons concerned. On demographic, economic, and political grounds it can also be argued that most of this modernization ought, in the typical country, to take place in rural settings, or at least in smaller towns or roadside settings, as distinct from urban settings which typically take the form of slums or bidonvilles where social services and economic opportunities are woefully inadequate.

It will be noted even in so brief a statement, that the ERUT sub-project was the most broadly defined of the three sub-projects in this research project. It looked at rural environment from the standpoint of economic geography and agricultural economics, at institutional differentiation and social stratification from the standpoint of sociology, and at culture change and acculturation from the standpoint of cultural anthropology. While this breadth has the advantage that it permits comprehension of whole processes of change, it carried also the disadvantage that comprehensive theory is still at a relatively undeveloped stage. It is unrealistic to expect such comprehensive theory to spring full-blown into life in the next few years. It was, therefore, thought to be more realistic to select a few problem areas for special attention -- areas that have theoretical as well as policy relevance -- and to attempt in the process of problem formulation to provide conceptual underpinnings such that each study would contribute to each subsequent study, and the total product would provide stimulus to theory development in a limited number of sub-areas of ERUT. Accordingly, work in Turkey looked at the consequences of an adult education program in terms of developing students' tendencies to build "modern" role relationships in a Levyian sense, and in terms of Goodenough's (1963) formulations about the individual's "private culture," and its enlargement by the addition of a "modern" "operating culture." Research in the Philippines considered "professional background" and "self-image as a professional" as a causal factor in motivating development-oriented community participation on the part of elementary and secondary teachers in the rural Philippines. The Thailand study, borrowing from Rogers' work on the diffusion of innovations and McClelland's work on achievement motivation, looked retrospectively at educational background as a factor explaining differential acceptance of agricultural innovations among rural people. In the Philippines, on the basis of Rosenberg's (1968) theories of "self-esteem" and Kahl's formulation of "modernity" as a complex attitudinal configuration, a study examined rural-

enculturated students selected on the basis of merit to attend the Philippine National Science High School. The research sought to trace changes in self-esteem and modernity as the students moved through the five years of that school and to test Meyer's (1968) interesting notion of "chartering" and evaluate the effect on the student (in terms of self-image and social image) of the mere fact that he has been selected to attend a school which society has "chartered" to produce an elite.

Geographically, emphasis was placed on Thailand, Malaysia, Indonesia, and the Philippines, because of the common ecological conditions that characterize this area, which underlie a variety of historical experiences, educational systems, and culture-change and modernization processes. A second reason for such specialization was that the principal investigator for ERUT has spent six years in the area as a researcher, and thus felt greater assurance in handling area-specific variables. Emphasis was also given to linguistic variables, especially where, in a given country or area, one dominant language is spoken by all urbanites, and one or more different local languages spoken mainly by rural residents. This emphasis sought to take advantage of Stanford's recent expansion of an interdepartmental graduate program in linguistics, and its growing capability in the growing field of sociolinguistics.

Methods

The research contract with which this final report deals led to the production of 13 published country case studies and a further 18 country case studies that are completed or in process, but remain unpublished. This research effort was produced by three separate research teams under the direction of Eugene Staley, succeeded by Martin Carnoy, Hans N. Weiler and Robert B. Textor. Each of the principal investigators produced his own final report, on the basis of the format suggested in the Office of Education brochure "Preparing Research Reports for the U. S. Office of Education" of September 1968. These reports outlined the methods and presented findings of the component studies. For specific information on the methodologies used in the individual studies in the areas of Occupational Education and Training for Development (OET), Education and the Formation of Social and Civic Attitudes (ESCA), and Education and the Rural-Urban Transformation (ERUT), it is necessary, therefore, to refer to the monographs that have been submitted and particularly to the sub-project final reports.

No further summary likely to be meaningful can be presented within the framework of this overall Final Report on the contract. A very general description and some specific comments on methodology, however, may be useful.

All published studies, except the "Account of the International Workshop" (OET-2) and Sims' monograph "Self-Image and Social Change -- Towards an Integrated Theory of Cybernetic Behavior" (ERUT-9), involved field survey work in developing countries of Latin America, Africa, Asia, and the South Pacific as did all but one of the as yet unpublished reports and that deals with educational problems of a domestic minority population, the Chinese students in San Francisco.

Each case study was carried out by a person with previous experience in the culture of the population with which he dealt and who had a working knowledge of the language. With few exceptions, the actual studies were preceded by a site inspection visit, which permitted detailed arrangements for the later study to be made. While these site explorations were both time-consuming and costly, it became evident that they constituted a highly worthwhile investment and contributed significantly to the ultimate success of the studies. They made it possible to avoid delays and frustrations that otherwise might have been inevitable, to plan ahead and to sidestep or overcome obstacles that could not have been anticipated and, in many cases, to lay the basis for collaboration with professional colleagues in the country who thus had an opportunity to become associated with the research projects. In this way the field research contributed to strengthening local research capacity and interest and increased the value of the studies beyond the mere worth of the finding.

The project as a whole was concerned primarily with educational problems related to the functioning of national school systems. The research focus did not preclude, however, concern with aspects of education more broadly defined as "the process by which man improves in the specific traits of being human." Thus Buripakdi's study in Thailand and Carpenter's in Turkey dealt principally with the socialization of adults and were only marginally concerned with aspects of formal schooling.

The field work of each researcher followed accepted methodological practices of the principal social science disciplines involved. Typically this called for survey techniques based on self-administered questionnaires or structured and open-ended interviews in studies with a primary economic or sociological focus, designed to gather empirical data to test the specific research hypotheses each project sought to investigate. These were based on standard sampling techniques. The data gathered in this manner in the field were analyzed -- generally with the help of the computer on the basis of programs in the Statistical Package for the Social Sciences (SPSS) developed at Stanford University. For studies primarily oriented toward anthropology and ethnography, standard techniques of participant observation were employed. In each case, the field data were supplemented by a careful review of the existing literature and an examination of relevant theory. What made the studies unique is that the field workers were not only thoroughly trained (and often experienced) in the field of education and

a specific social science discipline, but had a broad cross-disciplinary background. This enabled the investigator to approach the research problem in holistic fashion and conduct the studies in a realistic conceptual framework taking the total cultural setting of the problem into consideration. In this way, the ground has now been prepared for the development of broader generalization and the extension of theory across national and cultural boundaries in the field of education for development.

FINDINGS AND ANALYSIS

Results

The problem of reporting results in a project as broad in scope as this research project is similar to that of discussing its methodology. Each study sets out its results in careful detail. These have been summarized in the sub-project final reports, and, as far as the findings permit, used as a basis for the formulation of broader generalizations and the development of further researchable hypotheses.

What may be useful here is a few comments on the general nature of results. To maintain the format of the original research project, these are given here separately for each of the sub-projects.

Occupational Education and Training (OET).

It would appear that, at a relatively similar level of development but under widely different cultural conditions, formal vocational education seems to have a relatively low pay-off. The cost of such education is inevitably high; and there are indications derived from data obtained in the Near East, the Middle East, and India, that formal school training in industry-related skills neither necessarily leads to relevant employment nor that persons who have obtained such training perform significantly better in such jobs unless further on-the-job training is provided.

The education provided by the ordinary academic secondary schools apparently gives students a degree of flexibility and of general competence which serves as a basis for specific in-service training, and which employers seem to prefer, as indicated by empirical data on wages and in-service promotion. The data strongly suggest that specific job training is most effectively and efficiently provided within the employment system. There are some indications that qualitative differences among workers are rooted less in specific skills than in attitudes toward the job and motivation, these latter qualities being fostered most strongly in the factory and on the job, rather than in a school or training institute.

Attitude and motivation play a part not only in how a given job is performed, but also, at the higher level of professional attainment, where it is going to be performed. The results of one of the studies on factors associated with international migration of the highly educated show convincingly that there is a strong correlation between immigration and the degree of professional commitment at home. These data suggest that, in the Philippines at least, public rather than private schools contribute most strongly toward developing this sense of commitment. While nothing indicates that the "brain drain" can be stopped, it would appear that it could at least be minimized by applying the selection criteria suggested by this study in the recruitment of students for training abroad.

Education and the Formation of Social and Civic Attitudes (ESCA).

The various studies in the ESCA section of the project have demonstrated the analytical and explanatory utility of a more complex model of the role of education in the political learning process. In such a model the relationship between education and the acquisition of political attitudes and beliefs is assumed to be affected by specified antecedent, concurrent, and anticipated conditions to which the learner is exposed. Within this perspective, there is thus room for empirically identifying not only the specific contribution which various aspects of the schooling situation make toward the political learning process, but also the ways in which early political learning, extra-school learning, and the anticipation of post-school social futures interact to specify and modify the nature and intensity of the school's influence.

The rich body of data gathered and processed in the various case studies has yielded comparative insights into the political learning process far too varied and extensive for a brief summary. The sheer wealth of descriptive evidence on the sociographic and attitudinal characteristics of carefully selected, representative samples of students and teachers in a variety of settings allows already the identification of some crucial development problems, as for instance in our findings on the extent of political alienation among certain student populations, on the intensity of inter-ethnic trust and distrust among pupils of different ethnic origins, or on the cognitive and affective profiles of various sub-groups of the teaching profession.

The real significance of the findings, however, lies in their contribution to a much more refined understanding of the political learning process itself, and of the factors that play a role in that process.

Out of the many propositions derived from the general model and tested in the various sets of data, one might serve as an illustrative indication of the kinds of insights the project has generated: several of the studies have found (in a significantly varied range of settings) that the kind and degree of effect which certain characteristics of the schooling situation (e.g., ethnic composition) have on the political learning process are in significant measure determined by the status gains which the student expects as a result of graduating from a more or less prestigious educational institution. In other words, whether or not, and in what ways, the school operates as an effective agent of "political socialization" cannot be predicted just from an examination, no matter how comprehensive, of the actual school situation, but has to be understood in terms of the school's "status" in the society, and of the students' perception of that status.

Findings like these are, of course, by no means the end of the explanatory task; while several of the studies have already gone beyond this point (e.g., in the direction of exploring the conditions under which students form differential perceptions of their school's "status conferral" potential), much more work needs to be done to further strengthen the cross-cultural validity of our findings. Many of the data sets developed as a result of individual case studies contain information which will be highly useful in these further analyses. When new and additional empirical data are needed, the research to date has considerably enhanced our ability to identify appropriate and effective research methodologies and strategies.

One further result of the research in this section of the project deserves to be mentioned: in all the case studies, particular care was taken in the design and validation of appropriate attitudinal and behavioral measures. In some instances, completely new measurements were developed, while in others, measures previously developed for different settings and populations were carefully adapted and validated for use in a different context. As a result, the project has generated a substantial amount of very valuable and reliable instruments for the measurement of a wide range of attitudinal and behavioral variables.

Education and the Rural-Urban Transformation (ERUT).

Given the breadth and diversity of the ERUT field, it is hardly possible to draw together empirical results in the form of conclusions tightly ordered within an explicit theoretical framework. Each study, insofar as specific results are concerned, must at this stage stand by itself, although it is to be expected that the methodology used in the individual case studies will have considerable "multiplier effect". The approach of Satorn's Thailand study appears adaptable to a wide variety of scaling problems and offers vigorous reliability controls. It may thus serve as basis for enquiry in related and, hopefully comparable, field projects.

Beyond the relevance of specific studies in this series, the Norm Set Theory developed by Sims promises to be capable of serving as framework for a broad range of problems concerning the adjustment of individuals to their environment under conditions of change. It may well, therefore, serve to accommodate a broad array of generalizations derived from research into the process of transformation over time. Sims' synthesis of theories concerning the process of change adds a degree of specificity to them that make these other formulations more useful without running counter to their essential thrust.

In this sense, it is possible for example to reconcile Goodenough's self-image theory with Sims' and recast it in Norm Set terms to define the job of the ERUT-type educator as a person responsible for determining for a given rural population what new self-images may best correspond to their aspirations and what norm sets are likely

to be appropriate to those desired self-images. The educator should then take responsibility for designing, in terms of both cognitive and affective dimensions, programs for enabling students to acquire these new norm sets, for helping them to find out appropriate opportunities, to "act out" these new norm sets in ways that are not unduly upsetting in a social or psychological sense, and for providing appropriate and timely reinforcing feedback.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This section will draw attention to the broad policy implications that can be drawn from the research project as a whole, rather than seek to summarize once more conclusions that have been spelled out in detail in the individual research monographs and reports. In doing this, extensive use is made of sub-project Final Reports and particularly the "Summary of Research on Education and the Rural-Urban Transformation" (ERUT-10). It is there that the broad problems inherent in the study of education for development are most clearly presented.

It must be recognized that in the field of education no country starts with a clean slate. There are going institutions, traditions, practices and attitudes, as well as constraints imposed by scarcities of human and financial resources. These make an often somewhat rigid frame for institutional choices open to policy planners and implementors of policy for education for development. This frame cannot be ignored; nor can it easily be bent. But within it, there is, as the studies undertaken in this research project show clearly, ample opportunity to explore and establish new linkages between the education provided in formal, traditional school systems and a wide range of other institutions and agencies that function within the society and can be adjusted to serve new or wider needs.

The studies suggest convincingly the need of conceiving of education broadly to include much more than the formal schooling of children. Education, defined as both teaching or training and as opportunity to learn, must reach people when they are ready, where they need it, in terms they are prepared to understand and act upon. Regardless of how trite the word has become through over-use, it must be "relevant" and functionally and directly related to the setting in which it takes place.

In a way -- and regardless of their specific forms -- this is what each of these studies has been all about. What the studies have accomplished and what makes them valuable beyond the merits of specific findings is to act as "survey stakes." Their value lies less in their individual and invariably carefully chosen position than in their role as reference point for increasingly more precise measurement that will eventually permit construction and synthesis.

In this perspective, the field of educational planning for development would seem to best be served in the years ahead if resources would continue to be spent on precisely the kind of research that this project has generated. There is need to move away from research that focuses primarily on purely educational variables affecting the inner workings of school systems and neglects the contextual factors essential

in providing a basis for the analysis of findings and for policy recommendations related to the economic, social, and political role of education for development.

The studies show clearly that the process of education almost everywhere is too narrowly conceived and, as a consequence, generally under-planned or badly planned. Even where considerable resources are directed toward planning, it is evident that some of the important outcomes are random or accidental and do not derive from the purposeful design of those responsible for programs.

There is little difference in this respect between countries in the process of modernizing change and other more developed nations, except only that in the former these shortcomings are more serious. Their resource base is thinner; there is less margin for the fat of waste; political pressures for development are often stronger; and much of the Third World is better organized for planned intervention than developed nations and particularly the United States. Highly centralized governments, where decisions can be made by a relatively small group of leaders, simplify the planning process enormously. These conditions also increase the burden of responsibility of the mandate of planning education for development.

Recommendations

Specific recommendations must be read as they relate to the findings presented in the case studies. Here only those relevant to the research project as a whole can usefully be presented. Five general recommendations, however, can be derived from the entire project.

First, research into problems of education for development must go beyond the narrow confines of school systems and look at the economic, social, and political setting in which education takes place. It must, therefore, include not only immediately relevant theory in formulating educational variables, but must provide for the contextual variables of historical trend, cultural pattern, and socioeconomic structure.

It follows from this that the research scholar must be grounded not only in rigorous methodology, but also in the history, culture, and language of the area to be studied. Since research competence is not always and not necessarily associated with cultural sensitivity, this argues powerfully for joint research endeavors with scholars indigenous to the area in which studies are carried out. In this way research genuinely becomes a two-way endeavor, contributing not merely to the acquisition of new knowledge but to the exchange of knowledge and the broadening of research competence as well.

This final report has stressed that even a large and important project, involving dozens of careful case studies, can do no more than throw some light on isolated areas in the vast field of education for development. These studies have effectively shown the value of inter-disciplinary team research and point up the urgent need for continued effort in this direction.

The conclusions to which the studies have led make evident that differences in the area of education for development between less advanced and more developed nations tend to be differences of degree and emphasis, rather than differences in kind. The shackles of ignorance, the stagnation of tradition and the frustrations of those who would bring about change know no national or cultural boundaries. The constraints are those of the universal human mind. Over the years considerable concern in development has expressed itself in a commitment by American scholars to address themselves to problems of education in the Third World. It is evident that many of the lessons learned are directly relevant to our domestic problems, and that only by finding ways to adapt them to a search for solutions in the United States can we, in the long run, justify and sustain an ongoing research and development effort abroad. It is essential to demonstrate the capability of making our own school systems flexible and responsive to the demands of change in the ways that research findings abroad suggest.

Lastly, research must break out of the confines of aseptic concern and seek an audience beyond that of scholarly articles and monographs. Joint research projects are one step in this direction; research training programs bringing together students from different cultures and academic disciplines are another. Beyond that, it would seem highly desirable to build into at least some formal research projects, especially those in areas of immediately relevant practical concern, a possibility to work toward the practical testing in the field of some of the recommendations derived from findings, and for their subsequent evaluation. A way should be found to structure continued interaction between researchers and practitioners in order to encourage conceptual rigor among those who formulate plans and have the responsibility for their implementation and a sense of urgency and awareness of the day-to-day realities among those who contribute through their research toward the solution of problems concerning education for development.

APPENDIX

SIDEC STUDIES ON CONTENT AND METHODS OF EDUCATION FOR DEVELOPMENT

Sub-Series on Occupational Education and Training

OET-1. Planning Occupational Education and Training for Development, by Eugene Staley. 1968. Final Report. (Published by Orient Longmans, New Delhi, India, and by Frederick A. Praeger, New York, 1970.)

OET-2. Occupational Education and Training for Development: An Account of the International Workshop Held July 24 through August 5, 1967, at Stanford, California, by Marian Alexander-Frutschi, Editor. 1968. (Published by Orient Longmans, New Delhi, India.)

OET-3. Issues in Occupational Education and Training: A Case Study in Jordan, by Najati Al-Bukhari. 1968.

OET-4. Issues in Occupational Education and Training: A Case Study in Tunisia, by Najati Al-Bukhari. 1968.

OET-5. Education and Training for Industrial Development in India, by B. S. Vankata Rao. 1969.

OET-6. Factors Associated with the Migration of High-Level Persons from the Philippines to the U.S.A., by Josefina R. Cortes. 1970.

OET-7. Education, Training and Productivity: A Study of Skilled Workers in Two Factories in South India, by William P. Fuller. 1970.

Sub-Series on Education and the Formation of Social and Civic Attitudes

ESCA-1. Attitudes and Behavior of Teachers in Uganda: An Aspect of the Process of National Development, by David R. Evans. 1969. (Accepted for publication by Frederick A. Praeger, Inc., New York.)

ESCA-2. Education and National Development in Colombia, by Joaquin Paez-Gomez. 1969.

ESCA-3. Education and Modernization in Micronesia: A Case Study in Development and Development Planning, by Richard Pearse and Keith A. Bezanson. 1970.

ESCA-4. The Impact of University Social Structures on Student Alienation: A Venezuelan Case Study, by Robert F. Arnove. 1970. (Accepted for publication by Frederick A. Praeger, Inc., New York.)

ESCA-5. Intergroup Attitude Change in a Tribal Society: An Experimental Study in a New Guinea School, by Richard Pearse. 1970.

ESCA-6. The Effect of Cross-Cultural Inservice Training on Selected Attitudes of Elementary School Teacher Volunteers: A Field Experiment, by Roger Merdenhall Baty. 1970. (Accepted for publication by Frederick A. Praeger, Inc., New York.)

ESCA-7. Summary of Research on Education and the Formation of Social and Civic Attitudes, by Hans N. Weiler. 1971. Final Report.

Sub-Series on Education and the Rural-Urban Transformation

ERUT-1. The Provincial School Superintendent in Thailand: A Study of Role Perceptions and Expectations, by Pinyo Satorn. 1971.

ERUT-3. Culture, Politics, and Schools in Rural Philippines: An Ethnographic Study of Teacher Community Involvement, by Douglas E. Foley. 1971.

ERUT-9. Self-Image and Social Change Toward an Integrated Theory of Cybernetic Behavior, by Dennis Constance Sims. 1971.

ERUT-10. Summary of Research on Education and the Rural-Urban Transformation, by Robert B. Textor, Frank J. Moore, and George W. Parkyn with the collaboration of Dennis C. Sims and Richard L. Kimball. 1971. Final Report.

Studies Completed and/or in Progress Which Will Not Be Reproduced Because of Lack of Funds

OET-8. Educational Resources as Determinants of Scholastic Achievement: A Study of Primary Education in Iran, by John W. Ryan. 1971.

OET-9. The Role of Vocational Education and Other Modernizing Influences in the Acquisition of Attitudes Favorable Toward Modernization: A Tunisian Case Study, by Richard Sack. 1971.

ESCA-8. Education and Nation-Building in Malaysia: A Study of Institutional Effect in Thirty-four Malaysian Secondary Schools, by John C. Bock. 1970.

ESCA-9. Schooling Experience and the Making of Citizens: A Study of Tanzanian Secondary Students, by David Court. 1970.

ESCA-10. Different Patterns of Instruction in Liberia: Implications for Modernization, by Thomasyne L. Wilson. 1970.

ESCA-11. Higher Education for Leadership Roles in Educational Development Projects -- An Exploratory Study, by Lynn P. Hartzler. 1971.

ESCA-12. The Making of the New Congolese Elite in the Formal Education System, by William M. Rideout, Jr. 1971.

ESCA-13. Education and Language Training in Forming Social Brokers in Singapore, by Douglas P. Murray. 1971.

ESCA-14. The Relationship Between Participation in Sports and the Moral and Political Socialization of High School Youth, by Barry E. Stern. 1971.

ESCA-15. Teacher Training in the Northern States of Nigeria: Organizational Effects of Socialization for Citizenship, by Darrell DuBey. 1971.

ESCA-16. A Study of Uncertainty Behavior in a Ghanian School: The Existence of Appropriate Incertitude, Its Teachability and Generalizability in the Classroom, by Keith Bezanson. 1971.

ESCA-17. Measurement of Bilingual Usage Among Chinese Students in San Francisco: An Empirical Basis for the Development of a Bilingual Curriculum, by R. David Getzoff. 1971.

ESCA-18. Education and the Learning of Conflict Norms: A Study of West German Youths, by Hans N. Weiler. 1972.

ERUT-2. The Turkish Adult Education Program and the Transformation of Rural Society, by Harold F. Carpenter, Jr. 1970.

ERUT-4. Education and Agricultural Development: Educational Implications of Farmers' Progressiveness in Thailand, by Chalio Buripakdi. 1971.

ERUT-5. The Rural School and Rural Development Among the Iban in Sarawak, Malaysia, by James Madison Seymour. 1971.

ERUT-6. An Inquiry into the Relationship Between a New Science Curriculum and Creative Growth: A Study of Male Non-School Children, Pupils and Adults in Uganda, by Richard L. Kimball. 1971.

ERUT-7. The Effects of Elite Recruitment and Training on Diffuse Socialization Outcomes, by Jose C. Benitez. 1971.

ERUT-8. Transmission of Work Value Dispositions in Cross-Cultural Interaction, by Ronald B. Herring. 1971.